

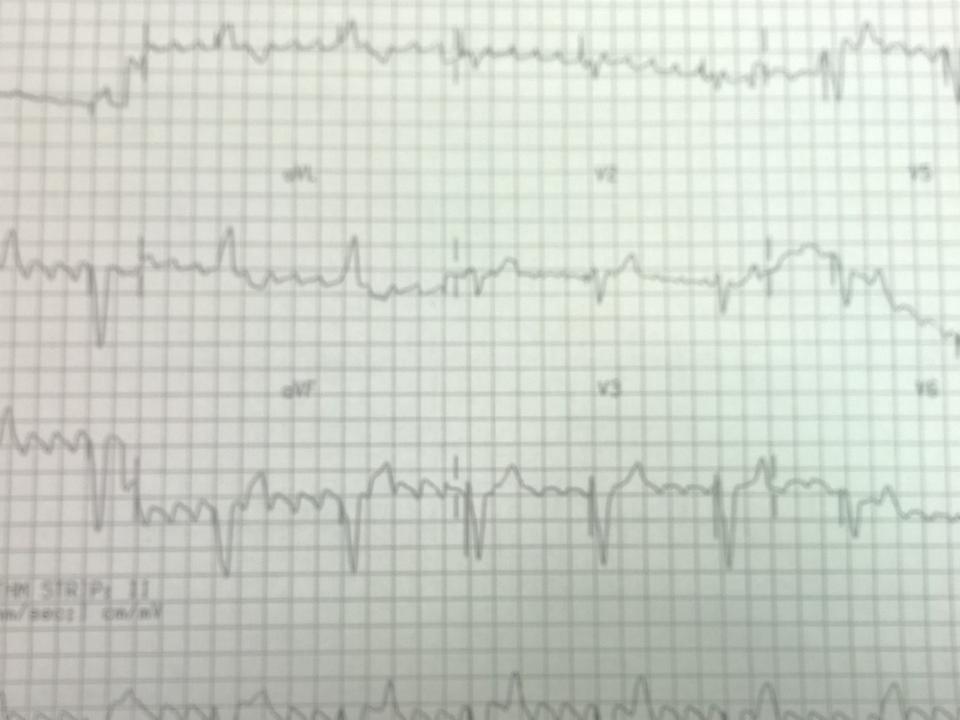
#### Stem

 A 70 years old man has been brought to the ED with marked dyspnoea.

• Start thinking of general causes of dyspnoea in an adult

## **ECG**

• State 4 abnormalities



#### **Abnormalities**

- Ventricular paced rhythm with rate around 65 bpm
- Atrial flutter with rate of 300 bpm
- AV dissociation
- Others including
  - LAD
  - Peaked T waves
  - Broad ventricular complexes

#### **Errors**

- Missed paced rhythm = zero score
- Degree of AV block
  - 3:1, 4:1 etc
  - Usually calculate ratio of Atrial rate to Ventricular rate
  - In this case, with a paced rhythm none of this applies
- Axis
  - Right rather than Left

## Provide unifying diagnosis

Ventricular paced rhythm with atrial flutter and AV dissociation
 = patient in chronic atrial flutter with AV node ablation and ventricular pacing.

#### **Errors**

- Pacemaker malfunction including failure to sense
- Pacemaker not controlling atrial flutter
- MI, hyperkalaemia, PE etc

### 3 Medications considered

- Not antiarrhythmics
- Drugs for dyspnoea
  - Diuretics, inotropes, bronchdilators, antibiotics etc

## 2 Procedures to improve dyspnoea

- NIV
- Pacemaker rate increase
- Others
  - Drainage of pericardial effusion
  - Fluid loading
  - PCI

## Non-scoring answers

- Cardioversion
- Oxygen
- Sitting up
- Activate Cath Lab
- Magnet over pacemaker

## Factors that determine if warfarin activity should be reversed

- Indication for warfarin
- Level of INR
- Active bleeding
- Organ failure
- Planned invasive procedures
- Falls risk
- Other reason for high risk of bleeding

# Modification to defibrillation in a patient with a pacemaker

Don't place the pads/paddles over the pacemaker

### Results — Set Pass Score = 10

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• Pass (10-12) = 8
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- Borderline (7-10) = 18
- Fail (2-6) = 12
- Median score = 7.5

## Message

- Learn about pacemakers
- Paced ECGs
- Functions, problems
- Learn about ICDs as well